

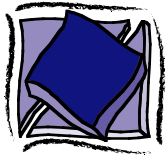
Quality teaching in NSW public schools

Discussion paper



Professional Support and Curriculum Directorate

May 2003

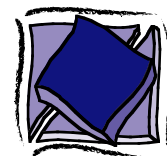


Quality teaching in NSW public schools
Discussion paper

© 2003 State of NSW
Department of Education and Training
Professional Support and Curriculum Directorate
SYDNEY NSW

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Purpose of this document

This discussion paper has been developed to focus and support the work of school leaders and teachers in addressing teaching and learning in NSW public schools as a long-term strategic priority. The paper proposes a model for pedagogy that can be applied from Kindergarten to Year 12 and across all key learning areas.

This discussion paper will be used as a reference point to focus attention on, and provide consistent messages about, pedagogy across schools and within the Department for the next two years. During this time feedback on the model will be collected to add to and enrich discussion about pedagogy in NSW public schools.

... a reference point to focus attention on, and provide consistent messages about, pedagogy ...

The model proposed in the paper can be used by principals and school executive to lead and focus the work of the school community on improving teaching practice and hence student learning outcomes. Teachers can use the model as a self-reflection tool to help them to understand, analyse and focus their own teaching practices for improved student learning. Schools can also share the model in discussions with parents and community members about teaching and learning in the school.

The model will also be used by officers of the Department to inform and guide the nature of support provided to schools for teaching and learning. In primary schools the model will support the delivery of all primary syllabuses, including support for the implementation of the new Mathematics K–6 syllabus from 2003. In secondary schools it will be used to support the introduction of the new Years 7–10 syllabuses and the continuation of support for Stage 6 syllabus implementation.

Go online and have your say

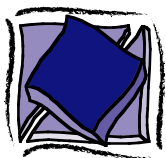
As you work with the pedagogy model in this paper, opportunities to engage in discussion forums and provide feedback are offered on the Professional Support and Curriculum Directorate web site.

Go to: www.curriculumsupport.nsw.edu.au for more information and to have your say.

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www.curriculumsupport.nsw.edu.au*

Acknowledgements

The model described in this paper was developed by Dr James Ladwig and Professor Jennifer Gore from The University of Newcastle in consultation with and on behalf of the NSW Department of Education and Training.



Introduction

The core business of the profession of teaching is pedagogy. As the art and science of teaching, pedagogy is evident both in the activity that takes place in classrooms or other educational settings and in the nature or quality of the tasks set by teachers to guide and develop student learning. Pedagogy focuses attention on the processes through which knowledge is constructed, produced and critiqued. Crucially, the term *pedagogy* recognises that how one teaches is inseparable from what one teaches, from what and how one assesses and from how one learns.

Pedagogy ... the art and science of teaching ...

The NSW Department of Education and Training is committed to providing a public school system, which develops fully the talents and capacities of all students in the pursuit of attaining the highest educational standards irrespective of students' background or circumstance. Clearly, pedagogy is only one dimension of the larger school context including the local school community, the organisation of curriculum, cultural traditions and personal relationships. Research has consistently shown that, of all the things that schools can control, it is the quality of pedagogy that most directly and most powerfully affects the quality of learning outcomes that students demonstrate. While teachers work in extremely complex environments, with a host of factors impacting on their work, the nature and quality of pedagogy is their core business.

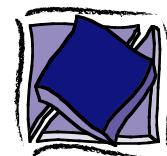
... it is the quality of pedagogy that most directly and most powerfully affects the quality of learning ...

The model of pedagogy described in this document has been developed as a framework for teachers' professional self-reflection and for school improvement practices in NSW public schools. With the aim of improving pedagogy and hence student learning, the model is available for use by schools and teachers to focus discussion and critical reflection on the teaching and assessment practices that take place in classrooms.

The model is based on a sound research understanding of how teaching and school improvement can promote improved student learning outcomes. Building on the growing documentation of best practice in NSW and the most reliable national and international pedagogical research, the elements of this model of pedagogy can be applied across all years of schooling, K–12, and all curriculum areas.

... based on a sound research understanding of how teaching ... can promote improved student learning outcomes.

The model has been designed to cater for a wide variety of student and teacher individual differences. That is, across all the individual differences teachers take into account in their teaching, and across all the different styles of and approaches to teaching, this document identifies generic qualities of pedagogy that have been successfully applied in



a range of school contexts and are shown to lead to improved student learning. While NSW teachers will continue to cater for individual learners and differences associated with various groups in our community, this model provides a consistent pedagogical framework within which all NSW teachers and schools can operate.

... provides a consistent pedagogical framework within which all NSW teachers and schools can operate.

The model has also been designed to assist the NSW Department of Education and Training in reaching the *National Goals for Schooling in the Twenty-first Century*, known as the *Adelaide Declaration* (1999). In particular, the model of pedagogy supports the Department's commitment to the principles of social justice and equity, including the commitment to delivering equitable student outcomes.

The model is not intended to be the final word on pedagogy. While it builds on the most reliable current research and best practice in pedagogy, it will be tested out and changed as necessary over time as teachers engage with the dimensions and elements of pedagogy in classrooms across NSW.

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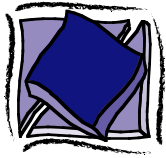
Three dimensions of pedagogy

The features of classroom practice that have been linked to improved student outcomes can be characterised as representing three dimensions of pedagogy:

- pedagogy that is fundamentally based on promoting high levels of **intellectual quality**
- pedagogy that is soundly based on promoting a **quality learning environment**
- pedagogy that develops and makes explicit to students the **significance** of their work.

These three dimensions form the basis of the model for pedagogy in NSW public schools.

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Background

The New South Wales context

The model of pedagogy outlined in this document is based not only on research, but also builds, most importantly, on what teachers already know and value, and many already do in terms of quality teaching practice. At the same time, however, it gives greater attention to some aspects of pedagogy than may have typically been the case. In particular, this model highlights the need to recognise intellectual quality as central to pedagogy.

... builds, most importantly, on what teachers already know and value, and many already do in terms of quality teaching practice.

Recent NSW reports (Ramsey, Vinson) have argued strongly for greater attention to be given to pedagogy focusing on intellectual quality. Over recent years, a number of documents from the Department have listed or outlined aspects of good pedagogy consistent with those identified above; for example, *Quality Teaching Quality Learning* (1997), *Pedagogy for the Future* (2001) discussion paper, *Successful Teaching in the NSW Higher School Certificate* (Ayers et al, 1998) and *School Map: Best Practice Statements* (2001). Collectively these documents address elements of teaching that constitute the dimensions of pedagogy in this model.

The Department is also engaged in a number of major research projects that have a focus on pedagogy. These include: *An Exceptional Schooling Outcomes Project* (AESOP), which is researching Years 7–10 public schooling sites attaining outstanding student learning outcomes; and the *Numeracy Research in NSW Primary Schools Project*, which is a three-year, cross-sectoral, Commonwealth funded project.

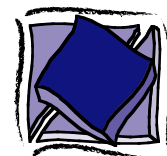
Generating a long list of specific elements of teaching is not well supported by pedagogical research. The model in this document intentionally synthesises many of these elements and develops them into a more focused framework for schools and teachers to use.

The model ... synthesises many of the elements and develops them into a more focused framework for schools and teachers to use.

Research background¹

There has been a long history of research that has attempted to identify teaching practices that will improve students' learning. However, it is only recently that diverse research traditions have come to a common understanding of quality pedagogy. It has taken a long time to reach this consensus

¹ For a more detailed analysis of the research background to the model presented here refer to *Quality teaching in NSW public schools: An annotated bibliography* (2003).



because it has been difficult to isolate the independent effects of any one specific teaching technique or learning skill, and therefore difficult to implement any specific technique in a school-wide way. As a result, researchers began to seek out ways of identifying more general characterisations of pedagogy.

More general characterisations of pedagogy, such as *Authentic Pedagogy* (Newmann et al, 1996) and *Productive Pedagogies* (QSRLS, 2001) allow educators to focus on underlying dimensions of pedagogy that have meaning in *real* classrooms, can be sustained organisationally by schools, and have demonstrated positive effects on learning outcomes for all students.

A substantial body of research linking pedagogical practices to improved student learning outcomes supports each of the three dimensions of the NSW model. Research has demonstrated that pedagogy focusing on high levels of **intellectual quality** benefits students, whether they are high or low achievers, from backgrounds typically identified as educationally disadvantaged or gifted and talented, or students identified with special needs in mainstream classes. The positive effects of high levels of intellectual quality have been found to influence individual student outcomes on both performance-based assessment measures and conventional standardised achievement tests.

Research has also soundly demonstrated the importance of a **quality learning environment**. Research into effective teaching, authentic and productive pedagogy, teachers' expectations, students' time-on task and student engagement has consistently demonstrated that classrooms in which there is a strong, positive and supportive learning environment produce improved student outcomes. While many teachers are justifiably concerned with improvements in the learning environment of their classrooms as an end in itself, it is also important to recognise that a high quality learning environment has its own independent effect on the quality of work students are able to do.

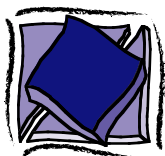
The third dimension of pedagogy identified in the NSW model represents a synthesis of research into the means through which teachers make learning meaningful and important to students both as individuals and as members of social groups. That is, pedagogy that promotes intellectual quality and produces a quality learning environment also requires some means by which teachers link the work of their students to personal, social and cultural contexts outside of the classroom. For the work of students to have meaning and impact beyond the classroom, pedagogy must make it clear that students' learning matters. The third dimension of

... allow educators to focus on underlying dimensions of pedagogy that have meaning in real classrooms ...

*... pedagogy focusing on high levels of **intellectual quality** benefits students ...*

*... the importance of a **quality learning environment**.*

*... pedagogy must make it clear that students' learning matters ... that learning is seen by students to have **significance**.*



high quality pedagogy is that learning is seen by students to have **significance**.

Figure 1 below illustrates the relationship among the three dimensions of pedagogy in the NSW model. There are two ideas this diagram intends to convey. First, intellectual quality is central to pedagogy that produces high quality student learning outcomes. Second, all three dimensions are essential for students to benefit from high intellectual quality work.

... all three dimensions are essential for students to benefit from high intellectual quality work.

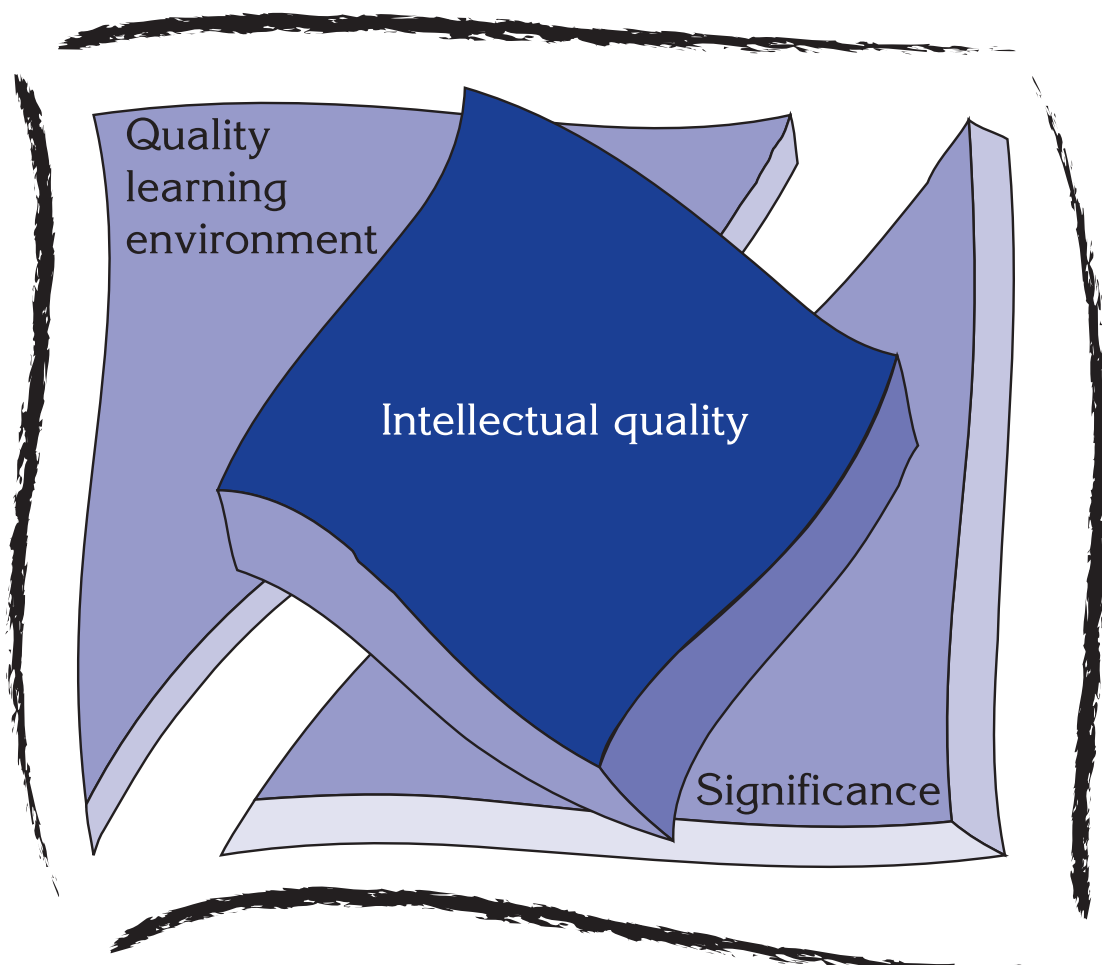
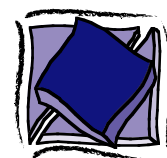


Figure 1: Three dimensions of pedagogy in NSW public schools



The NSW model of pedagogy

The three dimensions of the NSW model

1. **Intellectual quality** refers to pedagogy focused on producing deep understanding of important, substantive concepts, skills and ideas. Such pedagogy treats knowledge as something that requires active construction and requires students to engage in higher-order thinking and to communicate substantively about what they are learning.
2. **Quality learning environment** refers to pedagogy that creates classrooms where students and teachers work productively in an environment clearly focused on learning. Such pedagogy sets high and explicit expectations and develops positive relationships between teachers and students and among students.
3. **Significance** refers to pedagogy that helps make learning meaningful and important to students. Such pedagogy draws clear connections with students' prior knowledge and identities, with contexts outside of the classroom, and with multiple ways of knowing or cultural perspectives.

1. *Intellectual quality*
2. *Quality learning environment*
3. *Significance*

Elements of the NSW model

Each of the three dimensions of pedagogy can be described in terms of a number of elements. Each element has been selected and defined on the basis of:

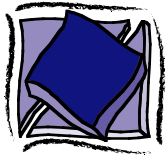
- a sound and reliable research base linking the practices or qualities of the element to improved student learning outcomes
- the practical capacity of each element to act as an indicator of the underlying dimension.

Each of the three dimensions of pedagogy can be described in terms of a number of elements.

Elements	Intellectual quality	Quality learning environment	Significance
	Deep knowledge	Explicit quality criteria	Background knowledge
	Deep understanding	Engagement	Cultural knowledge
	Problematic knowledge	High expectations	Knowledge integration
	Higher-order thinking	Social support	Inclusivity
	Metalanguage	Students' self-regulation	Connectedness
	Substantive communication	Student direction	Narrative

Table 1: The dimensions and elements of the NSW model of pedagogy

A summary discussion of each dimension is provided on the following pages, along with an elaboration of what each element looks like if you were observing a classroom or if you were reviewing a documented assessment task.



Intellectual quality

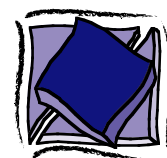
The intellectual quality dimension in this model builds from a recognition that high quality student outcomes result if learning is focused on intellectual work that is challenging, centred on significant concepts and ideas, and requires substantial cognitive and academic engagement with deep knowledge. In order to develop these characteristics in classroom and assessment practices, it is important for teachers themselves to have a deep understanding of the knowledge they are addressing with students, and to seek that depth in the work of their students.

When translating NSW syllabuses into specific classroom programs, lessons and learning activities, the first thing teachers will need to do is select and organise the essential knowledge, understandings, skills and values from the syllabus around central concepts or ideas. Once lessons are focused on these concepts or ideas, the main task of teachers in those lessons is one of developing the students' deep understanding of the selected knowledge, understandings, skills and values and of the connections among them.

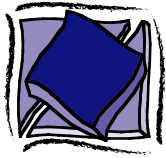
The following table shows the way the elements look in the classroom and in documented assessment tasks.

... high quality student outcomes result if learning is focused on intellectual work that is challenging ...

... developing the students' deep understanding ...



Element	What does it look like in classrooms?	What does it look like in assessment tasks?
<i>Deep knowledge</i>	The knowledge being addressed is focused on a small number of key concepts and ideas within topics, subjects or KLAs, and on the relationships between and among concepts.	Tasks focus on a small number of key concepts and ideas within topics, subjects or KLAs, and require clear articulation of the relationships between and among concepts.
<i>Deep understanding</i>	Students demonstrate a profound and meaningful understanding of central ideas and the relationships between and among those central ideas.	Tasks require students to demonstrate deep rather than superficial understanding of what they are learning.
<i>Problematic knowledge</i>	Students are encouraged to address multiple perspectives and/or solutions and to recognise that knowledge has been constructed and therefore is open to question.	Tasks require students to present or analyse alternative perspectives and/or solutions and to demonstrate how the construction of knowledge relates to their understanding of the task.
<i>Higher-order thinking</i>	Students are regularly engaged in thinking that requires them to organise, reorganise, apply, analyse, synthesise and evaluate knowledge and information.	Tasks require students to organise, reorganise, apply, analyse, synthesise and evaluate knowledge and information.
<i>Metalanguage</i>	Lessons explicitly name and analyse knowledge as a specialist language (metalanguage), and provide frequent commentary on language use and the various contexts of differing language uses.	Tasks require the use of metalanguage, commentary on language use and the various contexts of differing language uses.
<i>Substantive communication</i>	Students are regularly engaged in sustained conversations about the concepts and ideas they are encountering. These conversations can be manifest in oral, written or artistic forms.	Tasks require students to communicate their understanding in an elaborate and substantive fashion. This communication can take oral, written or artistic forms.



Quality learning environment

Learning is improved when the classroom or other learning environments provide high levels of support for learning. This dimension of pedagogy draws attention to the specific need to support *learning*, as well as the need to support *students* in classrooms.

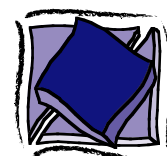
... the specific need to support learning in classrooms ...

A positive environment is often understood as a caring, safe and supportive classroom. Students, parents and teachers recognise the value of a positive classroom environment. However, where the classroom carries the general concern for supporting students further to become supportive of learning, above and beyond being generally positive, the outcomes demonstrated by students will be enhanced.

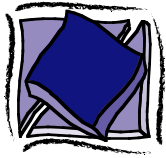
This focus on supporting learning, needs to be sustained by all adults who share the learning environment, including parents, caregivers, student teachers and others assisting students' learning. While the focus of this document is on environments for which teachers are directly responsible, research has demonstrated that a focus on quality learning environments should extend beyond the classroom, such as in students' homes.

This focus on supporting learning, needs to be sustained by all adults who share the learning environment ...

The following table shows the way the elements look in the classroom and in documented assessment tasks.



Element	What does it look like in classrooms?	What does it look like in assessment tasks?
<i>Explicit quality criteria</i>	Students are provided with explicit criteria for the quality of work they are to produce and those criteria are a regular reference point for the development and assessment of student work.	Tasks provide explicit criteria for the quality of work students are expected to produce and those criteria are reference points for assessing student work.
<i>Engagement</i>	Most students, most of the time, are seriously engaged in the lesson or assessment activity, rather than going through the motions. Students display sustained interest and attention.	Not necessarily observable in written tasks, but may be observable in performance-based tasks as it would be in the classroom.
<i>High expectations</i>	High expectations of all students are communicated, and conceptual risk taking is encouraged and rewarded.	Tasks demonstrate that high expectations are expected of all students and conceptual risk taking is encouraged and rewarded.
<i>Social support</i>	There is strong positive support for learning and mutual respect among teachers and students and others assisting students' learning. The classroom is free of negative personal comment or put-downs.	Not readily observable in written tasks, but may be observable in performance-based tasks as it would be in the classroom.
<i>Students' self-regulation</i>	Students demonstrate autonomy and initiative so that minimal attention to the disciplining and regulation of student behaviour is required.	Not readily observable in most tasks. Observable in tasks which are structured to promote student self-regulation.
<i>Student direction</i>	Students exercise some direction over the selection of activities related to their learning and the means and manner by which these activities will be done.	Tasks are designed so that students exercise some direction over the selection of activities related to their learning and the means and manner by which these tasks will be done.



Significance

To achieve high quality learning outcomes for each student, students need to see why, and to understand that, their learning matters. The significance of students' learning lies in the connections between and among the student as an individual and social being, the nature of the work at hand, and the contexts in which such work matters.

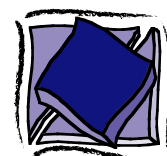
... students need to see why, and to understand that, their learning matters.

To make these connections clear, teachers can link lessons to: the prior knowledge from which students work; the social, demographic and cultural backgrounds of students, families and the local community; the future contexts in which school learning would be applied; and the differing fields of knowledge with which teachers and students interact. To build effective connections teachers will need to work from a combination of their knowledge of the specific subject matter they are teaching and their knowledge of the cognitive, social and cultural backgrounds of their students.

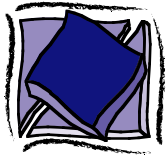
Ways in which teachers can develop their professional knowledge and practices related to significance include: talking with colleagues and sharing student work samples to better understand the continuum of staged outcomes in syllabuses; seeking feedback from students and parents; negotiating learning activities with their students; communicating with colleagues, parents and community members about students and the local community; accessing current research and participating in professional reading and associations.

... teachers can develop their professional knowledge and practices related to significance ...

The following table shows the way the elements look in the classroom and in documented assessment tasks.



Element	What does it look like in classrooms?	What does it look like in assessment tasks?
<i>Background knowledge</i>	Lessons regularly and explicitly build from students' background knowledge, in terms of prior school knowledge as well as other aspects of their personal lives.	Tasks explicitly build from students' background knowledge and require students to demonstrate links between old and new knowledge.
<i>Cultural knowledge</i>	Lessons regularly incorporate the cultural knowledge of diverse social groupings (such as economic class, gender, ethnicity, race, sexuality, disability, language and religion).	Tasks incorporate the cultural knowledge of diverse social groupings.
<i>Knowledge integration</i>	Lessons regularly demonstrate links between and within subjects and key learning areas.	Tasks require students to build from an understanding of the links between and within subjects and key learning areas.
<i>Inclusivity</i>	Lessons include and publicly value the participation of all students across the social and cultural backgrounds represented in the classroom.	Tasks require the participation of all students across the social and cultural backgrounds represented in the classroom.
<i>Connectedness</i>	Lesson activities rely on the application of school knowledge in real-life contexts or problems, and provide opportunities for students to share their work with audiences beyond the classroom and school.	Tasks apply school knowledge in real-life contexts or problems, and provide opportunities for students to share their work with audiences beyond the classroom and school.
<i>Narrative</i>	Lessons employ narrative accounts as either (or both) a process or content of lessons to enrich student understanding.	Tasks employ narrative accounts as either (or both) a process or content of the task to enrich student understanding.



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For more details of the research literature relevant to the model of pedagogy described in this paper refer to *Quality teaching in NSW public schools: An annotated bibliography* (2003).